Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
An Inquiry into the Commission's	)	
Policies and Rules Regarding AM	)	MM Docket No. 93-177
Radio Service Directional Antenna	)	
Performance Verification	)	

To: The Commission

COMMENTS OF CLEAR CHANNEL COMMUNICATIONS, INC.

Clear Channel Communications, Inc. ("Clear Channel"), pursuant to the Commission's Rules, hereby submits these Comments in response to the above captioned *Notice of Proposed Rule Making* (the "*Notice*"). 1/ In the *Notice*, the Commission proposes to reduce its testing procedures for AM directional antennas in order to reduce the regulatory and compliance burdens on AM broadcasters using directional antennas. The Commission seeks to reduce the regulatory burdens on licensees to the minimum necessary to achieve its policy objectives of controlling interference and assuring adequate community coverage.

Clear Channel supports the Commission's goal and urges the Commission to reduce the regulatory and compliance burdens on AM broadcasters

using directional antenna systems by relaxing proof of performance requirements. Clear Channel urges the Commission:

- to authorize the use of numerical modeling methods in place of traditional proofs of performance methods;
- to relax radial requirements for proofs of performance;
- to eradicate or revise the concept of monitoring points;
- to authorize the removal of critical array designations.

Implementing these changes will increase the accuracy and reliability of the resulting data while reducing the cost burden to licensees and the analytical burden to the Commission. Furthermore, these changes will reduce the risk of interference by providing more accurate means of verifying the proper adjustment of AM directional antenna arrays. Reducing interference, in turn, will serve the public interest.

I. NUMERICAL MODELING METHODS ARE MORE ACCURATE THAN TRADITIONAL PROOFS OF PERFORMANCE METHODS

Clear Channel supports the Commission's efforts to reduce the burden on AM licensees. In pursuit of this goal, we strongly urge that the Commission extend the current proposals and adopt rules permitting the use of numerical modeling and analysis of AM directional arrays in place of traditional proofs of performance measurements. In the experience of Clear Channel, one of the largest operators of Class A and Class B AM stations, numerical modeling – where

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1/ *See Notice of Proposed Rule Making, An Inquiry into the Commission's Policies and Rules Regarding AM Radio Service Directional Antenna Performance Verification*, MM Docket No. 93-177(released June 11, 1999).

permitted – offers better accuracy, reduced cost, and better reliability that the traditional proofs of performance measurements.

We propose the Commission take the bold step of permitting AM directional stations to use numerical modeling methods where antenna structures and environment can be accurately modeled using a numerical model such as NEC or MININEC. There is precedent for the Commission's adoption of such rules: the environmental protection rules and rules governing FM stations permit the use of numerical array equations and scale models for determining the elevation patterns of FM antennas and the performance of FM directional antennas.

Current AM proof of performance measurement methods require a series of field measurements over a range of distances from an antenna array. The antenna pattern is then adjusted, or trimmed, by engineers employed by the station to achieve field measurements that match the standard pattern. Often, the horizontal-plane (ground wave) pattern is distorted by the adjustments to account for non-sinusoidal current distribution in the towers, far-field reradiators and other measurement anomalies. This has an effect contrary to that intended by the regulations, as the intentional pattern distortion affects the high angle (skywave) radiation from the array.

Numerical modeling can account for these factors, and remove negative effects from objects in the far-field of the antenna. The result will be lower interference, which is in the public interest.

We propose that the Commission authorize licensees to conduct proofs of performance using numerical modeling, where an appropriate sample system is

installed. The sample system would then be tested, with all applicable parameters (impedances, line lengths, sample devices, etc.) be recorded and made part of the station license. The numerical model would include the predicted operating parameters as shown on the antenna monitor, and any significant reradiators in the near-field of the antenna.

At the present time, we propose the Commission limit licensees to use of these modeling techniques where towers of uniform cross-sectional area and conventional feed systems are employed. As experience is gained, the Commission should expand the use of these techniques to other types of structures.

II. REDUCING PROOFS OF PERFORMANCE REQUIREMENTS WILL INCREASE EFFICIENCY AND REDUCE COSTS

Clear Channel supports the Commission's desire to lessen the requirements for proofs of performance. With respect to this goal, we urge the Commission to reduce the number of points per radial to 10, and limit the number of radials to include only the pattern minima and minor lobes that are less than 10 dB below the pattern RMS. We also urge the Commission to eliminate the graphical process for determining the non-directional inverse field, and to authorize stations to employ the estimated non-directional RMS for the non-directional radiator employed in the proof of performance. The Commission should retain the option for each licensee to measure additional points or radials, and permit licensees to perform a graphical analysis of the inverse field, if desired.

We believe that adopting this reduced proof of performance process can eliminate the distinction between full and partial proofs of performance. This will reduce the cost to the licensee and reduce the analytical burden on the Commission.

III. MONITORING POINTS ARE AN INACCURATE MEANS OF MEASURING RADIATION ALONG A RADIAL

Monitoring points are established in the station license as an indication of the actual radiation along a radial from an array. Unfortunately, monitoring points rarely, if ever, serve as anything other than a general indication of the array performance. In fact, because of seasonal changes, environmental changes, and measurement techniques, many monitoring points have limits set well above the value reflective of the actual radiation along a radial. The values are so inaccurate that the Commission's own field engineers once were instructed that they should not cite a station for improper array performance based solely on monitoring point measurements.

We urge the Commission to revisit the concept of monitoring points, particularly for arrays that are licensed based on computer modeling. If the Commission decides to retain monitoring point requirements, we urge the following:

(1) the Commission should authorize points with a value of 10% above the predicted maximum based on a full proof-of-performance;

(2) the Commission should establish (or reestablish) point limits solely on the basis of full directional and non-directional measurements along the radial.

IV. RULES CONCERNING CRITICAL ARRAYS IMPOSE BURDENS AND COST ON BROADCASTERS WITHOUT PROVIDING PUBLIC BENEFIT

Clear Channel supports the Commission's proposals to revise the rules concerning the designation of critical arrays. Clear Channel believes that this designation has outlived its usefulness, and that adequate protection of other stations is achieved through the existing rules defining array tolerance. As applied today, these rules impose additional burdens and costs on certain licensees, without providing a corresponding public benefit. Despite the large number of arrays that are not licensed as "critical," no significant amounts of interference have been reported from such facilities. We propose that licensees be permitted to remove such designations upon filing an application or FCC Form 302. Furthermore, we propose that licensees should be free to install monitoring equipment capable of accurately ensuring proper performance of their antenna systems.

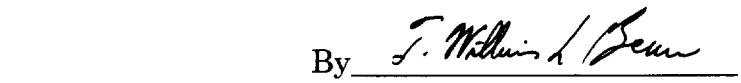
V. CONCLUSION

The current proof of performance measurement requirements impose significant cost and time burdens on AM Broadcasters operating directional antennas. Furthermore, current measurement requirements are subject to inaccuracies. Relaxing these requirements and changing testing methods that result in inaccurate measurements not only will ease the compliance burden on licensees, but also will improve the efficiency of tests measuring field strength. This will result in less interference, furthering the public interest.

For the foregoing reasons, the Commission should adopt the modifications to existing rules described herein.

Respectfully submitted,

CLEAR CHANNEL COMMUNICATIONS, INC.

By 

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